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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/620,253

07/20/2000

Barry A. Simkins

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12/21/2005

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EXAMINER

BAHTA, KIDEST

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/620,253	SIMKINS, BARRY A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kidest Bahta	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Sachdeva et al. (U.S. Patent 6,464,496 B1).

Regarding claims 1 and 13, Rubbert discloses generating a template representing data common to the object (column 4, lines 21-25); generating specific data to customize the object in conjunction with the template wherein the specific data comprises at least one tool path (column 4, lines 1-20) and directing at least one tool along the at least one tool path to fabricate a customized version of the object (column 4, lines 30-39) receiving a digital representation of a target path (column Fig. 1); generating a mathematically smoothed version of the target path (Fig. 10); applying the smoothed target path to generate a secondary target path (column Fig. 13); and generating a streamlined too path (Fig. 2).

Regarding claims 3 and 14, Rubbert discloses the tool path is represented as a spline (Fig. 3).

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Regarding claims 4 and 15, Rubbert discloses the object has an ideal model surface, wherein generating the specific data comprises creating an idealized tool path from the ideal model surface (Fig. 1).

Regarding claims 5 and 16, Rubbert discloses generating a mathematically smooth 3D spline using the idealized tool-path (column 13, lines 13-25).

Regarding claims 6 and 17, Rubbert discloses generating surface normal from the ideal model surface at points distributed around the idealized tool-path

Regarding claims 7 and 18, Rubbert discloses displacing each surface normal from its end to the nearest point on the smooth 3D spline (column 7, lines 1-19).

Regarding claims 8-9 and 19, Rubbert discloses creating a spline connecting each unattached end of each surface normal ([Fig. 3) the ends are attached sequentially in a loop (column 8, lines 37-51).

Regarding claims 10 and 20, Rubbert discloses directing the tool comprises using a source spline to define motion of the tool by defining tool orientation vectors (Figs. 7-9).

Regarding claims 11-12 and 21, Rubbert discloses the source spline is adjusted by moderately elevating or lowering angle of the surface normal (column 8, lines 17-51).

***Response to Amendment/Response to Arguments***

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3. Applicant's arguments with respect to claims 1, 3-21 has been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that the continuation-in-part of the prior art, cited in the previous Office Action Rubbert et al. (US 2004/0073417), not available for review. Examiner reviewed the continuation-in-part application (09/560,640) and notes that such application is an Abandoned application. The examiner considered the applicant arguments and withdrawn the previous Final Office Action and made New Final Office Action.

#### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed Kideest Bahta whose telephone number is 571-272-3737. The examiner can normally be reached on Monday - Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAG system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kideest Bahta

December 14, 2005

